U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

TRANSMITTAL
(Only for new nonprovisional applications under 37 CFR 1.53(b))

UTILITY PATENT APPLICATION

| Under the Paperwork Reduction Act of 1 | 995, no pe | rsons are required to respo | and to a collection of information unless it displays a valid O | MB contr | oi nu | mber | | |
|--|------------|-----------------------------|---|----------|------------|------|--|--|
| LITY | Attorn | ey Docket No. | 671302-2006 | | | | | |
| PPLICATION | First In | ventor | Masayoshi YAMAGUCHI | | | | | |
| | Title | MODEL ANIM | 1AL WITH OVEREXPRESSION IN | | | | | |
| MITTAL | | REGUCALCI | V | ₽. | _ | | | |
| oplications under 37 CFR 1.53(b)) | Expres | s Mail Label No. | EV 385416870 US | 2.4 | - <u>-</u> | | | |

| A DRI LO A MIONI DI DI ADVINO | A11 2. 3. | 11.C4 D 4 4 4 | nr) = 2 | | | | | |
|---|--|-----------------------------------|-------------------------------|--|--|--|--|--|
| APPLICATION ELEMENTS | | ail Stop Patent App | dication 2 | | | | | |
| See MDED charter 600 concerning utility notant application contents | | mmissioner for Pat D. Box 1450 | tents 020 | | | | | |
| See MPEP chapter 600 concerning utility patent application contents. | | | 150 0157 1450 | | | | | |
| 57 | | xandria, VA 2231 | 7 | | | | | |
| 1. Fee Transmittal Form (e.g., PTO/SB/17) | 7. CD-ROM or CD-R in duplicate, large table | | | | | | | |
| (Submit an original, and a duplicate for fee processing) | or Computer Program (Appendix) | | | | | | | |
| 2. Applicant claims small entity status. See 37 CFR 1.27. | 8. Nucleotide and/or Amino Acid Sequence Submission | | | | | | | |
| | (if applicable, all necessary) | | | | | | | |
| 3. Specification [Total Pages 1-59]] (preferred arrangement set forth below) | a. Computer Readable Form (CFR) | | | | | | | |
| - Descriptive title of the invention | b. Specification sequence Listing on: | | | | | | | |
| - Cross References to Related Applications | i. CD-ROM or CD-R (2 copies); or | | | | | | | |
| - Statement Regarding Fed sponsored R & D | ii. paper (5 sheets) | | | | | | | |
| - Reference to sequence listing, a table, or a computer | <u>, </u> | | | | | | | |
| program listing appendix Background of the Invention | c. Statements verifying identity of above copies ACCOMPANYING APPLICATION PARTS | | | | | | | |
| - Brief Summary of the Invention | ACCOM | IPANYING APPLIC | ATION PARTS | | | | | |
| - Brief Description of the Drawings (if filed) | 9. Assignment | t Papers (cover sheet & | documents(s)) | | | | | |
| - Detailed Description | 10. 37 CFR 3.7 | 3(b) Statement | Power of | | | | | |
| - Claim(s) [Pages 60-66] | (when there | e is an assignee) | Attorney | | | | | |
| - Abstract of the Disclosure [ONE PAGE - PAGE 67] | Power of A | ttorney : | · | | | | | |
| 4. Drawing(s)(35 U.S.C. 113) [Total Sheets 5] | _ | inslation Document (if | applicable) | | | | | |
| 5. Oath or Declaration [Total Pages 3, unsigned] | | | | | | | | |
| a. Newly executed (original or copy) | | | | | | | | |
| b. Copy from a prior application (37 CFR 1.63(d)) | Statement (IDS)/PTO-1449 Citations 13. Preliminary Amendment | | | | | | | |
| (for continuation/divisional with Box 18 completed) | | | | | | | | |
| i. DELETION OF INVENTOR(S) | | eipt Postcard (MPEP 5 | 503) | | | | | |
| Signed statement attached deleting inventor(s) | | specifically itemized) | | | | | | |
| named in the prior application, see 37 CFR | 15. Certified Copy of Priority Document(s) | | | | | | | |
| 1.63(d)(2) and 1.33(b). | (if foreign priority is claimed) | | | | | | | |
| 6. Application Data Sheet. See 37 CFR 1.76. | 16. Request and Certification under 35 U.S.C. 122(b)(2)(B)(i). | | | | | | | |
| | Applicant must attach from PTO/SB/35 or its equivalent. | | | | | | | |
| | 17 Other: | | | | | | | |
| 18. If a CONTINUING APPLICATION, check appropriate box, an | d supply the requisite inf | formation below and i | n a preliminary amendment, or | | | | | |
| in an Application Data Sheet under 37 CFR 1.76: | | | | | | | | |
| Continuation Divisional Continuation | n-part (CIP) o | f prior application No. | : PCT/JP02/09611 filed | | | | | |
| September 19, 2002 Prior application information: Examiner: | | Froun/Art I Init. | | | | | | |
| | | Group/Art Unit: | | | | | | |
| For CONTINUATION OR DIVISIONAL APPS only: The entire disclosure o | f the prior application, fro | m which an oath or dec | laration is supplied under | | | | | |
| Box 5b, is considered a part of the disclosure of the accompanying continuation. The incorporation can only be relied upon when a portion has been inadverted. | | | | | | | | |
| The incorporation can only be relied upon when a portion has been inadvertently omitted from the submitted application parts. | | | | | | | | |
| 19. CORRESPONDENCE ADDRESS | | | | | | | | |
| Customer Number 20999 or Correspondence address below | | | | | | | | |
| Name Thomas J. Kowalski | | | | | | | | |
| Address Frommer Lawrence & Haug LLP, 745 Fifth | Avenue | | | | | | | |
| City New York Sta | | Zip Co | ode 10151 | | | | | |
| Country USA Telephor | 1 | | | | | | | |
| | | | | | | | | |
| | istration No. (Attorne | | | | | | | |
| Signature Transfer female // | _ | Date | March 19, 2004 | | | | | |

Reduction Act of 1965, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

| 22/ | Under the Paperwork Reduction A |
|--------|---|
| 3- (| FEE TRANSMITTAL |
| J.S. P | for FY 2003 |
| 7 | Effective 01/01/2003. Patent fees are subject to annual revision. |

TOTAL AMOUNT OF PAYMENT

(\$)1,130.00

| Complete if Known | | | | | | | | |
|----------------------|---------------------|---|--|--|--|--|--|--|
| Application Number | | · | | | | | | |
| Filing Date | HEREWITH | | | | | | | |
| First Named Inventor | Masayoshi YAMAGUCHI | | | | | | | |
| Examiner Name | | - | | | | | | |
| Attorney Docket No. | 671302-2006 | | | | | | | |

| METHOD OF PAYMENT (check all that apply) | | | FEE CALCULATION (continued) | | | | | | | | | | | |
|---|------------|---------------|---|-------------|----------------------------|-----------------------------|------------|-------------------------------|------------------------|-------------|---|------------------|------------------|-------------|
| Check Credit Card Money Order Other None | | | 3. A | DDITIO | IAL FE | ES | | | | | | | | |
| S orient Card Card Card Card Card Card Card Card | | | Large | e Entity | Sma | II Entity | | | | | | | | |
| Deposit Account: | | | Fee | Fee | Fee | Fee | | | | | | | | |
| Deposit Account Number | 50-0320 | | Code | \$ | Code | \$ | Fee Des | cription | ٠ | Fee Paid | | | | |
| Deposit Account Frommer Lawrence & Haug LLP | | 1051 | 130 | 2051 | 65 | Surcharge - late filing fee | or oath | | | | | | | |
| Account Name | | | | | | | 1052 | 50 | 2052 | 25 | Surcharge – late provision Cover sheet | al filing fee or | | |
| The Commiss | | | | | | | 1053 | 130 | 1053 | 130 | Non-English specification | | | |
| Charge fe | ee(s) ir | ndicated be | low | \boxtimes | Credit any ov | rerpayments | 1812 | 2,520 | 1812 | 2,520 | For filing a request for exp | | ation | |
| Charge a | iny add | litional fee(| s) during t | he pen | dency of this | application | 1804 | 920° | 1804 | 920* | Requesting publication of Examiner action | SIR prior to | | |
| Charge fe | | | low, exce | pt for t | the filing fee | to the above- | 1805 | 1,840* | 1805 | 1,840* | Requesting publication of Examiner action | SIR after | | |
| | | FE | E CALC | ULA | TION | , - | 1251 | 110 | 2251 | 55 | Extension for reply within i | irst month | | |
| 1. BASIC | FILIN | G FEE | | | | | 1252 | 420 | 2252 | 210 | Extension for reply within : | second month | | |
| | | | | | | | 1253 | 950 | 2253 | 475 | Extension for reply within t | hird month | | |
| Large Entity | <i>'</i> . | Small E | ntity | | | | 1254 | 1480 | 2254 | 740 | Extension for reply within t | ourth month | | |
| Fee Fee |) | Fee | Fee | <u>Fe</u> | e Description | Fee Paid | 1255 | 2010 | 2255 | 1005 | Extension for repty within t | ifth month | , . | |
| Code \$ | 70 | Code | \$ | I ILIPIA. | Clies to a | | 1401 | 330 | 2401 | 165 | Notice of Appeal | | | <u> </u> |
| 1001 77 | | 2001 | 385 | | filing fee | \$770.00 | 1402 | 330 | 2402 | 165 | Filing a brief in support of | an appeal | | |
| 1002 34 1003 53 | - | 2002 2003 | 170 265 | - | n filing fee filing fee | <u> </u> | 1403 | 290 | 2403 | 145 | Request for oral hearing | | - 1.11A - 3.8 | |
| 1004 77 | 70 | 2004 | 385 | Reissu | ue filing fee | | 1451 | 1,510 | 1451 | 1,510 | Petition to institute a public | use proceedi | ng . | |
| 1005 16 | 60 | 2005 | 80 | | ional filing fee | | 1452 | 110 | 2452 | 55 | Petition to revive 🗧 unavoi | dable . | | |
| SUBTOTAL (1) (\$)770.00 | | | | 1453 | 1330 | 2453 | 665 | Petition to revive- unintent | ional | | | | | |
| | | | | 1501 | 1330 | 2501 | 665 | Utility issue fee (or reissue |) | | | | | |
| 2. EXTRA (| CLAII | M FEES | FOR UT | ILITY | | ISSUE | 1502 | 480 | 2502 | 240 | Design issue fee | | | |
| | | | Extra Clair | ns | Fee from below | Fee Paid | 1503 | 640 | 2503 | 320 | Plant issue fee | | | |
| Total Claims | 40 | -20** = | 20 |] x | 18 | = 360.00 | 1460 | 130 | 1460 | 130 | Petitions to the Commission | ner | | |
| Independent Claims | 2 | -3** = | 0 | x | 86 | = 0 | 1807 | 50 | 1807 | 50 | Processing fee under 37 (| FR 1.17(q) | | |
| Multiple Depend | dent | • | | _ x | |] = | 1806 | 180 | 1806 | 180 | Submission of Information | Disclosure Str | nt | |
| Large Entity | , | Small E | ntity | | | | 8021 | 40 | 8021 | 40 | Recording each patent ass property (times number of | | | |
| Fee Fe | | Fee | Fee | | Fee Des | cription | 1809 | 770 | 2809 | 385 | Filing a submission after fi (37 CFR 1.129(a)) | | | |
| Code \$ | \$ | Code | \$ | | | | 1810 | 770 | 2810 | 385 | For each additional inventional examined (37 CFR 1.129) | | | |
| 1202 18 | 8 | 2202 | 9 | Clair | ns in excess of | 20 | 1801 | 770 | 2801 | 385 | Request for continued exa | |) | |
| 1201 80 | 6 | 2201 | 43 | Inde | pendent claims | in excess of 3 | 1802 | 900 | 1802 | 900 | Request for expedited exa application | mination of a | lesign | |
| 1203 29 | 90 . | 2203 | 145 | Multi | ple dependent o | daim, if not paid | Other f | ee (specify | • | | аррисаног | | | |
| 1204 86 | 6 | 2204 | 43 | | | t claims over original | | | | | | | _ | |
| 1205 18 | 8 | 2205 | patent 9 ** Reissue claims in excess of 20 and over original patent | | | | | | | | | | | |
| SUBTOTAL (2) (\$)360.00 | | | | | | | | | SI | JBTOTAL (3) | | (\$) | | |
| ** or number previously paid, if greater; For Reissues, see above | | | | | * Redu | iced by Ba | sic Filing | Fee | | | L | | | |
| SUBMITTED B | 3Y | | | | | <u> </u> | | | | | | Complete (| f applicable |) |
| Name (Print/Typ | oe) | | Thomas | s J. Ko | owalskj | 6/1/2 | | | tration No ney/Agen | | 32,147 | Telephone | (212 | 2) 588-0800 |
| Signature | | | The | Ma | 0 /1 | miles | | | | • | • | Date | 3 | 3/19/04 |

WARNING: Information on this form may become public. credit card information should not

be included on this form. Provide credit card information and authorization on PTO-2038.

This collection of information is required by 37 CFR 1.17 and 1.27. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting and submitting completed proficed from the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggesting or reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, Washington, DC 20231... DO NOT SEND FEES OR COMPLETED PORMS TO THIS ADDRESS. SEND TO: Mail Step AFCammissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450...

CERTIFICATE OF MAILING - SEPARATE PAPER - PATENT APPLICATION

Attorney Docket No.:

671302-2006

Title

MODEL ANIMAL WITH OVEREXPRESSION OF

REGUCALCIN

Filed

Herewith

Applicants

Masayoshi YAMAGUCHI

Mailed: March 19, 2004 via "Express Mail Label # EV 385416870 US

I hereby certify that the Patent Application for the above-referenced application is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 C.F.R. 1.10 on the date indicated above and is addressed to:

MAIL STOP PATENT APPLICATION Assistant Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Enclosed:

Utility Patent Application (total 67 pages, specification pages 1-59, claims

pages 60-66, abstract page 67) 5 Sheet of Figures (Figures 1-6) Sequence Listing (5 pages)

Utility Patent Application Transmittal

Fee Transmittal

Declaration and Power of Attorney (unsigned)

Check Number <u>030888</u> in the amount of \$1,130.00 (to cover filing fee)

Forms PCT/RO/105, PCT/ISA/202, PCT/ISA/210, 220, PCT/IB/301,

304, 306, 308, PCT/RO/101, PCT/IPEA/402, 408, 409, 416

Return Receipt Postcard

(Type/printed name of person mailing paper or fee)

Signature